

Derek Cobo

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Education

- Bachelor of Science, Applied and Computational Mathematics
Expected Completion: December 2026
University of California, Irvine
- FRM Part I Candidate (May 2027)

Projects

- Value-at-Risk and Expected Shortfall Engine (In progress)
 - Built a full sample historical simulation VaR and ES engine in Python
 - Implemented Marchenko-Pastur cleaning of covariance matrix
- Discounted Cash Flow Model (Collaborative, in progress)
 - Used the yfinance wrapper to pull data from different indices
 - Utilized parquet files for file management and aggregation

Skills

- C++
- Python (NumPy, Scikit-learn, PyTorch, Pandas)
- SQL

Relevant Coursework

- Mathematics of Machine Learning (Directed Study)
- Probability & Stochastic Processes
- Numerical Analysis
- Optimization
- Methods in Applied Mathematics (Graduate)
- Programming for Numerical Analysis and Data Science

Experience

- All Subjects Tutor at North Orange County Education (2025-Present)
 - Tutor adult learners in Microsoft Office (Excel, PowerPoint, Word, Copilot)
- Boxing Coach (2022-Present)
 - Run a class for 8 athletes at varying skill levels